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**TITLE: Dismantlable trolley**

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**ABSTRACT:**

**Medical trolleys, food trolleys and trolleys for supporting business equipment comprise four wheeled legs (10, 12, 14, 16), preferably of tubular**

**metal, which are joined together by struts or equivalent connecting members**

**(30, 32, 35, 36) of which at least one is removable from another part or other**

**parts (20, 22, 24, 26) of the trolley to allow the trolley to be packed in, or dismantled to, a substantially flat state. <IMAGE>**

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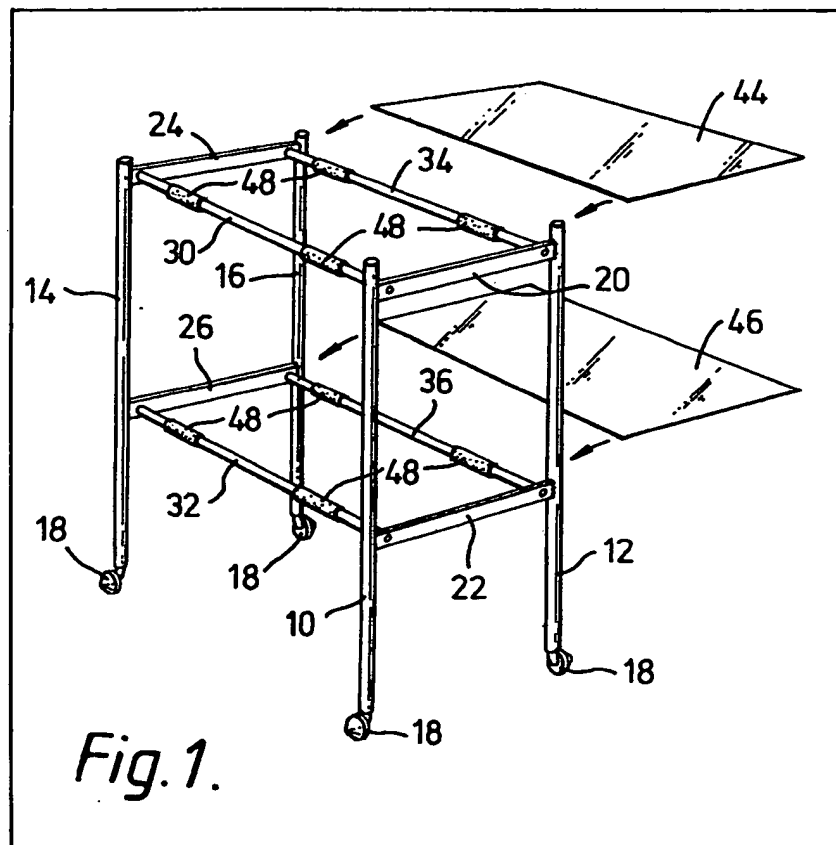
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(54) Dismantlable trolley

(57) Medical trolleys, food trolleys and trolleys for supporting business equipment comprise four wheeled legs (10, 12, 14, 16), preferably of tubular metal, which are joined

together by struts or equivalent connecting members (30, 32, 35, 36) of which at least one is removable from another part or other parts (20, 22, 24, 26) of the trolley to allow the trolley to be packed in, or dismantled to, a substantially flat state.



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Fig. 1.

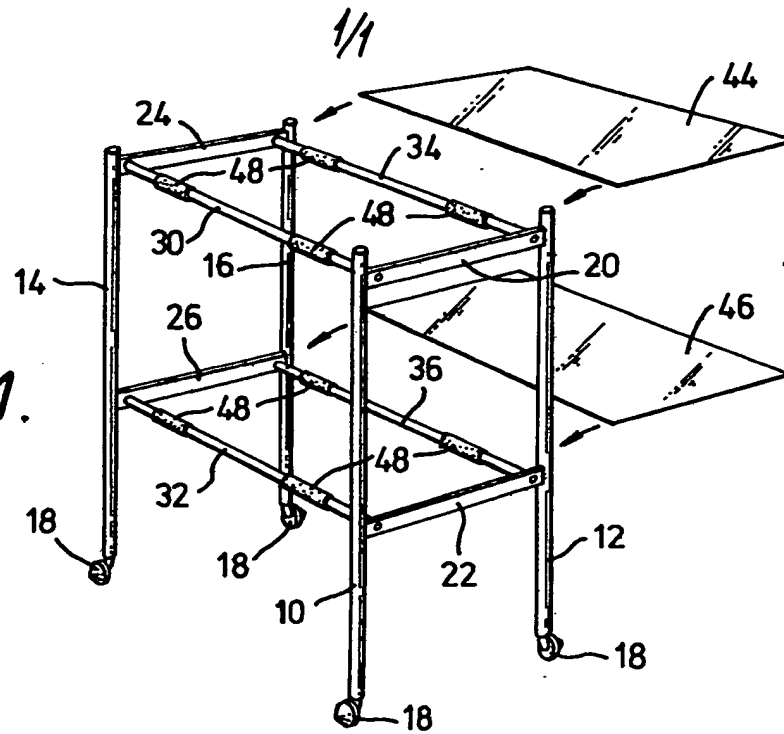
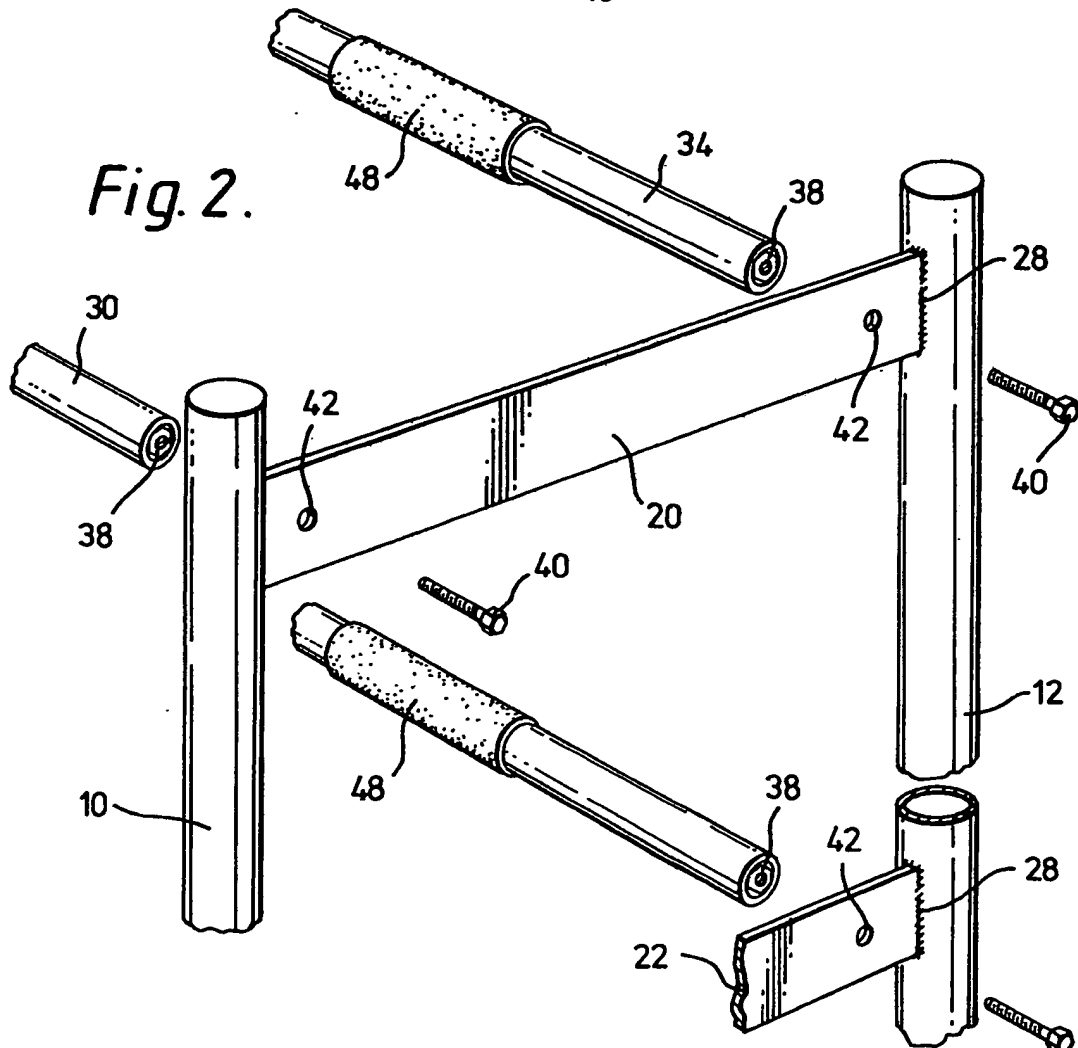


Fig. 2.



## SPECIFICATION

## Dismantlable trolley

This invention relates to trolleys and is especially applicable to instrument and/or dressing trolleys for medical use in hospitals and other establishments where medical work and operations are carried out. The invention is not however restricted to medical trolleys but can also be applied to other trolleys such as food trolleys and trolleys for supporting business equipment to name but two. The invention will however be described below in particular regard to medical trolleys.

Medical trolleys generally have a tubular metal frame and are provided with glass or metal shelves on which surgical instruments and dressings can be supported. In the past medical trolleys which may be dismantled have proved to be insufficiently rigid after a period of use and those which are not dismantlable in order to improve rigidity are fairly bulky pieces of equipment from the point of view of packaging and storing as a large volume of any packaging containing such a trolley is just air. It is therefore an aim of the present invention to overcome these drawbacks by making the trolley dismantlable but sufficiently rigid when assembled.

According to the invention, a trolley comprises four wheeled legs, preferably of tubular metal, which are joined together by struts or equivalent connecting members of which at least one is removable from another part or other parts of the trolley to allow the later to be packed in, or dismantled to, a substantially flat state.

In one form of generally rectangular trolley in accordance with the invention, the four wheeled legs comprise four straight upright tubes having wheels or castors at their lower ends. The two legs at each end of the trolleys are joined together by two parallel cross struts which are welded at their ends to the respective legs. The legs at one end of the trolley are joined to the legs at the other end of the trolley by longitudinal struts but, in contrast to the cross struts, the longitudinal struts are not welded at their ends to the respective legs. Instead, the longitudinal members, which are made of tubular metal, are provided with internal screw-threads at their ends — preferably by welding nuts within their ends — so that screws or bolts can be passed through holes in the cross struts and engage the screw-threads in the ends of the longitudinal members in order to make a rigid frame assembly which is nonetheless readily dismantlable.

An example of a medical trolley in accordance with the invention is shown in the accompanying drawing, in which —

Figure 1 is a perspective view of the trolley in its assembled state; and

Figure 2 is an enlarged perspective view of just part of the trolley shown in exploded form.

Generally rectangular trolley shown in Figure 1 is for use in supporting surgical instruments and dressings in hospitals. It comprises four legs 10,

12, 14 and 16 made of straight tubular metal, each leg having a wheel or castor 18 at its lower end.

The legs 10 and 12 at one end of the trolley are joined together by two parallel cross struts 20 and 22 — one near the top of the legs, and the other below the mid-points of the legs. The legs 14 and 16 are similarly joined together by cross struts 24 and 26. The cross struts are attached to their respective legs by weld connections 28 at the ends of the struts as shown more clearly in Figure 2.

It has been usual in the past for longitudinal struts to be similarly welded to the four legs so as to form a rigid trolley frame. In contrast to this, the trolley shown in the drawing has longitudinal struts 30, 32, 34 and 36 (two on each side) which join the two legs 10 and 12 at one end of the trolley to the legs 14 and 16 at the other end of the trolley by being removably attached to the cross struts 20, 22, 24 and 26. This is achieved by making the longitudinal struts of tubular metal and providing their ends with internal screw threads 38, preferably by welding nuts in their open ends. This allows the screwed ends of the longitudinal struts to receive bolts or screws 40 which pass through holes 42 in the cross struts and thus bolts the cross struts and the longitudinal struts securely together but in a dismantlable manner.

By making the cross struts of flat steel strip as shown in Figure 2 and not of tubular metal, the trolley is rendered more rigid as the latter might buckle under the pressure of the screws. An alternative would be to use solid rods for the cross struts.

By means of the construction shown in the drawing, the whole trolley can be packed in a flat state with the two pairs of legs 10, 12 and 14, 16 lying on top of one another, with the longitudinal struts lying on top of them or alongside them. The shelves 44 and 46 which are usual in medical trolleys can likewise be laid flat on the legs in such a package. As is customary in such trolleys, the longitudinal struts are each provided with two external rubber sleeves 48 on which the shelves 44 and 46 are removably supported during normal use of the trolley. The shelves 44 and 46 can be made of glass or metal according to choice.

It will thus be seen that the invention provides a dismantlable trolley which remains rigid in use, but which can be packed in a small space for despatch to a hospital from the manufacturer and which can then be assembled very easily by unskilled staff. Further, the trolley can be readily dismantled and packed away should it become surplus to requirements during the normal running of the hospital.

Although it is preferable for the longitudinal struts to be attached to the cross struts, it is also possible for the screws 40 to pass through holes in the legs 10, 12, 14 and 16 of the trolley instead of through the holes 42 in the cross struts. In that case, the legs should be reinforced at the points where the screws pass through them if they are made of tubular metal or, alternatively, a more solid form of leg should be used instead.

## CLAIMS

1. A medical trolley, food trolley or trolley for supporting business equipment, comprising four wheeled legs which are joined together by struts or equivalent connecting members of which at least one is removable from another part or other parts of the trolley to allow the trolley to be packed in, or dismantled to, a substantially flat state.
2. A trolley according to claim 1, in which the legs at one end of the trolley are joined to the legs at the other end of the trolley by longitudinal struts having releasable screw-threaded connections with the legs.
3. A trolley according to claim 1 or claim 2, in which the four wheeled legs comprise four straight upright metal tubes having wheels or castors at their lower ends, the two legs at each end of the trolleys being joined together by two cross struts which are welded or otherwise joined at their ends to the respective legs.
4. A trolley according to claim 3, in which the longitudinal members are made of tubular metal and are provided with internal screw-threaded portions at their ends so that screws or bolts passing through holes in the cross struts engage the screw-threads in the ends of the longitudinal members to make a rigid frame assembly which is nonetheless readily dismantlable.
5. A trolley according to claim 4, in which the longitudinal members are provided with screw-threaded portions by welding nuts within their ends.
6. A trolley substantially as described herein with reference to the accompanying drawing.